

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

Paper No. 27

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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**Ex parte** TERRY LEE OEHRKE, MICHAEL ALLEN O'BRIEN  
and SCOTT CHRISTOPHER WELLS

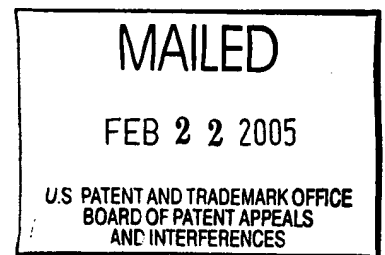
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Appeal No. 2004-2308  
Application 09/021,466

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ON BRIEF

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Before KRASS, RUGGIERO, and MACDONALD, **Administrative Patent Judges.**

MACDONALD, **Administrative Patent Judge.**

**DECISION ON APPEAL**

This is a decision on appeal from the final rejection of claims 79-115. Claims 1-78 have been canceled.

### **Invention**

Appellants' invention relates to a fully scalable and survivable network architecture and method. According to one feature of the invention, redundant front end processors (FEP) are implemented for each service offered by the data center to provide survivability to the data center. According to a second feature, data servers are separated from the front end processors to provide scalability. A switching device provides a connection between the front end processors and the data servers. Advantageously, an architecture according to the present invention allows for complete horizontal and vertical scalability of the data center. Additional FEPs may be added to address additional demand for a particular service or for additional services. Additional data storage capacity may be added independently. An architecture according to the present invention also provides complete fault tolerance. The combination of redundant application processors connected to separate data servers enables the system to remain fully operational when any single network component fails. Since the various FEPs and data storage devices operate at the same time, the redundancy is used efficiently. Appellants' specification at page 2, line 29, through page 3, line 11.

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Claim 82 is representative of the claimed invention and is reproduced as follows:

82. A scalable system for providing network processing and stored data access, the system comprising:

(a) at least first and second servers operative to process at least first and second user requests, respectively;

(b) a switch operatively connected to each of the servers;

(c) a plurality of data storage devices operatively connected to the switch; and

(d) wherein the servers operate independently of the data storage devices and are connected to the data storage devices via the switch in a manner to permit the inclusion of an additional server to process at least an additional user request without the inclusion of an additional data storage device.

#### **References**

The references relied on by the Examiner are as follows:

Peacock	4,914,570	Apr. 03, 1990
Tanaka et al. (Tanaka)	5,610,841	March 11, 1997

#### **Rejections At Issue**

Claims 79-80, 82-88, 91-95, 98-99, 102-104, 106, and 108-114 stand rejected under 35 U.S.C. § 102 as being anticipated by Tanaka.

Claims 81, 89, 96, 100, 105, 107, and 115 stand rejected under 35 U.S.C. § 103 as being obvious over Tanaka.

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Claims 90, 97, and 101 stand rejected under 35 U.S.C. § 103 as being obvious over the combination of Tanaka and Peacock.

Throughout our opinion, we make references to the Appellants' briefs, and to the Examiner's Answer for the respective details thereof.<sup>1</sup>

#### OPINION

With full consideration being given to the subject matter on appeal, the Examiner's rejections and the arguments of the Appellants and the Examiner, for the reasons stated *infra*, we affirm the Examiner's rejection of claims 79-80, 82-88, 91-95, 102-104, 106, and 108-113 under 35 U.S.C. § 102; we affirm the Examiner's rejection of claims 81, 89, 96, 105, and 107 under 35 U.S.C. § 103; we reverse the Examiner's rejection of claims 98-99 and 114 under 35 U.S.C. § 102; and we reverse the Examiner's rejection of claims 90, 97, 100-101, and 115 under 35 U.S.C. § 103.

Only those arguments actually made by Appellants have been considered in this decision. Arguments that Appellants could have made but chose not to make in the brief have not been

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<sup>1</sup>Appellants filed a supplemental appeal brief on February 2, 2004 fully replacing the appeal brief filed on February 24, 2003. Appellants filed a reply brief on June 24, 2004. The Examiner mailed an Examiner's Answer on April 20, 2004.

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considered and are deemed to be waived by Appellants [see 37 CFR § 41.37(c)(1)(vii) effective September 13, 2004 replacing 37 CFR § 1.192(a)].

Appellants have indicated that for purposes of this appeal the claims stand or fall together in seven groupings:

Claims 79-80, 82-85, 91-95, 102, 104, 106, 108, 110, and 112 as Group I;

Claims 86-88, 103, 109, 111, and 113 as Group II;

Claims 98-99 and 114 as Group III;

Claims 81, 89, 96, 105, and 107 as Group IV;

Claims 100 and 115 as Group V;

Claims 90 and 97 as Group VI; and

Claim 101 as Group VII.

See pages 4-5 of the supplemental brief. Furthermore, Appellants argue each group of claims separately and explain why the claims of each group are believed to be separately patentable. See pages 5-13 of the supplemental brief and pages 2-7 of the reply brief. Appellants have fully met the requirements of 37 CFR § 1.192 (c)(7) (July 1, 2002) as amended at 62 Fed. Reg. 53169 (October 10, 1997), which was controlling at the time of Appellants' filing of the brief. 37 CFR § 1.192 (c)(7) states:

*Grouping of claims.* For each ground of rejection which appellant contests and which applies to a group of two or more claims, the Board shall select a single claim from the

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group and shall decide the appeal as to the ground of rejection on the basis of that claim alone unless a statement is included that the claims of the group do not stand or fall together and, in the argument under paragraph (c)(8) of this section, appellant explains why the claims of the group are believed to be separately patentable. Merely pointing out differences in what the claims cover is not an argument as to why the claims are separately patentable.

We will, thereby, consider Appellants' claims as standing or falling together in the seven groups noted above, and we will treat:

Claim 82 as a representative claim of Group I;  
Claim 86 as a representative claim of Group II;  
Claim 98 as a representative claim of Group III;  
Claim 89 as a representative claim of Group IV;  
Claim 100 as a representative claim of Group V;  
Claim 90 as a representative claim of Group VI; and  
Claim 101 as a representative claim of Group VII.

If the brief fails to meet either requirement, the Board is free to select a single claim from each group and to decide the appeal of that rejection based solely on the selected representative claim. **In re McDaniel**, 293 F.3d 1379, 1383, 63 USPQ2d 1462, 1465 (Fed. Cir. 2002). **See also In re Watts**, 354 F.3d 1362, 1368, 69 USPQ2d 1453, 1457 (Fed. Cir. 2004).

**I. Whether the Rejection of Claims 79-80, 82-85, 91-95, 102, 104, 106, 108, 110, and 112 Under 35 U.S.C. § 102 is proper?**

It is our view, after consideration of the record before us, that the disclosure of Tanaka does fully meet the invention as recited in claims 79-80, 82-85, 91-95, 102, 104, 106, 108, 110, and 112. Accordingly, we affirm.

It is axiomatic that anticipation of a claim under § 102 can be found only if the prior art reference discloses every element of the claim. **See In re King**, 801 F.2d 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1986) and **Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.**, 730 F.2d 1452, 1458, 221 USPQ 481, 485 (Fed. Cir. 1984).

With respect to independent claim 82, Appellants argue at pages 6-7 of the brief (a) that claim 82 is directed to the scalability aspect of the claimed invention and (b) that the section of Tanaka cited in the rejection (page 4 of the answer) does not disclose or suggest the inclusion of an additional server as claimed. The Examiner rebuts these arguments at pages 5-7 of the answer by stating that (a) is merely a characteristic of the system recited in the claimed "wherein clause" and that as to (b) "it is an inherent characteristic of the Tanaka system that a new SCB can be added to the right side of the switch without adding a MSFS on the left side of the switch." The

Appellants then argue at pages 2-3 of the reply brief that (a) "[t]he Examiner's dismissal of the scalability [limitation] . . . is directly at odds with the established patent law; and (b) the Examiner is confusing an inherent characteristic . . . with a possible characteristic. We find Appellants arguments unpersuasive.

In the first place, the body of claim 82 fails to mention anything about scalability. Therefore, we find that the entire line of argument and rebuttal about scalability is misplaced. Rather, claim 82 is limited to the specific system recited in the body of the claim. Specifically, we find that the wherein clause at section (d) of claim 82 requires:

- 1) the [first and second] servers operate independently of the data storage devices;
- 2) the [first and second] servers ... are connected to the storage devices via the switch;
- 3) [the connection is] in a manner to permit the inclusion of an additional [third] server to process at least an additional user request; and
- 4) [the inclusion is] without the inclusion of an additional data storage device.

We note that Tanaka's teaching of the limitations of sections (a)-(c) of claim 82 is not in dispute. Therefore, claim 82 is anticipated if limitations (1)-(4) are found in the Tanaka reference.



In the second place, we find that the entire line of argument and rebuttal about the "inherent characteristics" of Tanaka is misplaced. It is only necessary to reach the issue of what is inherent if something in the claim is missing from the reference. We have reviewed the Tanaka patent and we find that limitation (1)-(4) above are all found in the Tanaka patent as follows at a) through d) below.

- a) the [first and second] servers (Tanaka, fig. 2, items 3000 and 3001) operate independently of (items 3000 and 3001 are separate from) the data storage devices (items 1000-1005).

Our reviewing court states in **In re Zletz**, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) that "claims must be interpreted as broadly as their terms reasonably allow." Our reviewing court further states, "[t]he terms used in the claims bear a 'heavy presumption' that they mean what they say and have the ordinary meaning that would be attributed to those words by persons skilled in the relevant art." **Texas Digital Sys. Inc v. Telegenix Inc.**, 308 F.3d 1193, 1202, 64 USPQ2d 1812, 1817 (Fed. Cir. 2002), **cert. denied**, 538 U.S. 1058 (2003).

Upon our review of Appellants' specification, we find that Appellants have defined the operational relationship between the server and data storage as, "the data servers are separate from the front end processors" (specification at page 3, line 2).

Thus the specification indicates at page 3, line 2, that the data storage devices (data servers) of claim 82 are separate from the servers (front end processors) of claim 82. We find that "separate from" is Appellants' definition of "independently" and that this definition is not different from the ordinary meaning. We find that one of the ordinary dictionary meanings of the term "independently" is "apart from others".<sup>2</sup>

We note that other definitions exist for the term "independently." However, the other definitions are inconsistent with Appellants' specification, which teaches that the processors (servers) interact with the storage device(s) via the switch in a query/data retrieval operation. See Appellants' specification at page 6, line 26, through page 7, line 6; page 9, lines 21-25; and page 13, line 25, through page 14, line 2.

- b) "the [first and second] servers (Tanaka, fig. 2, items 3000 and 3001) . . . are connected to the storage devices (items 1000-1005) via the switch (item 4000).
- c) "[the connection is] in a manner to permit the inclusion of an additional [third] server (Tanaka, fig. 2, item 3002) to process at least an additional user request.

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<sup>2</sup>Dictionary.com. Copy provided to Appellant.

We find that this teaching of Tanaka, that a third server is part of the system, is on its face a teaching that the connection at the switch (item 4000) is in a manner to permit the inclusion of an additional (third) server.

- d) "[the inclusion is] without the inclusion of an additional data storage device.

We find that Tanaka teaches at column 9, line 63, through column 10, line 11, that a program is stored across the MSFSSs (data storage devices) in a fragmented manner. Thus, the [first and second] servers (Tanaka, fig. 2, items 3000 and 3001) require that all of the data storage devices (items 1000-1005) be part of the system in order to retrieve a program. Therefore, the inclusion of the additional (third) server (Tanaka, fig. 2, item 3002) is without the inclusion of an additional data storage device because each program is already fully present in the MSFSSs.

We find that Tanaka teaches all of the elements of claim 82. Therefore, we will sustain the Examiner's rejection under 35 U.S.C. § 102.

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**II. Whether the Rejection of Claims 86-88, 103, 109, 111, and 113 Under 35 U.S.C. § 102 is proper?**

It is our view, after consideration of the record before us, that the disclosure of Tanaka does fully meet the invention as recited in claims 86-88, 103, 109, 111, and 113. Accordingly, we affirm.

With respect to dependent claim 86, Appellants argue at page 7 of the brief, that claim 86 requires "first and second (or a plurality of) data storage devices that each store substantially the same data." We find this argument unpersuasive with respect to claim 86.

We have reviewed claim 86 and do not find this limitation present in the claim. This argument is not commensurate in scope with the claim before us.

Therefore, we will sustain the Examiner's rejection under 35 U.S.C. § 102.

**III. Whether the Rejection of Claims 98-99 and 114 Under  
35 U.S.C. § 102 is proper?**

It is our view, after consideration of the record before us, that the disclosure of Tanaka does not fully meet the invention as recited in claims 98-99 and 114. Accordingly, we reverse.

With respect to dependent claim 98, Appellants argue at page 7 of the brief, that claim 98 requires "first and second (or a plurality of) data storage devices that each store substantially the same data." We find this argument persuasive with respect to claim 98.

The Examiner states at page 7 of the answer that Tanaka teaches that each MSFS storage device is a SCSI disk array and such an array provides for redundancy. We agree fully with the Examiner. However, this does not correspond to the limitations of claim 98 given the Examiner's use of Tanaka's MSFS to teach a storage device. The claim is only met if the data in a first MSFS is substantially the same as (redundant to) the data in a second MSFS. That is not the case in Tanaka. Rather, Tanaka's data is redundant within a single MSFS.

Therefore, we will not sustain the Examiner's rejection under 35 U.S.C. § 102.

**IV. Whether the Rejection of Claims 81, 89, 96, 105, and 107 Under 35 U.S.C. § 103 is proper?**

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would have suggested to one of ordinary skill in the art the invention as set forth in claims 81, 89, 96, 105, and 107. Accordingly, we affirm.

In rejecting claims under 35 U.S.C. § 103, the Examiner bears the initial burden of establishing a **prima facie** case of obviousness. **In re Oetiker**, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). **See also In re Piasecki**, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). The Examiner can satisfy this burden by showing that some objective teaching in the prior art or knowledge generally available to one of ordinary skill in the art suggests the claimed subject matter. **In re Fine**, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Only if this initial burden is met does the burden of coming forward with evidence or argument shift to the Appellants. **Oetiker**, 977 F.2d at 1445, 24 USPQ2d at 1444. **See also Piasecki**, 745 F.2d at 1472, 223 USPQ at 788.

An obviousness analysis commences with a review and consideration of all the pertinent evidence and arguments. "In reviewing the [E]xaminer's decision on appeal, the Board must

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necessarily weigh all of the evidence and argument." **Oetiker**, 977 F.2d at 1445, 24 USPQ2d at 1444. "[T]he Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion." **In re Lee**, 277 F.3d 1338, 1344, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002).

With respect to dependent claim 89, Appellants merely repeat the argument made with respect to claim 82. That argument was addressed above and was found unpersuasive.

Additionally, it is our view, that since Tanaka teaches "video on demand" (answer at pages 4-5) which meets the "content application" limitation of claim 89, claim 89 is anticipated by this teaching of Tanaka. Appellants have chose to draft claim 89 by stating that the application is "selected from the group consisting of". Such "Markush" claim language results in the claim being anticipated if any of the applications in the group are taught by the reference. A disclosure that anticipates under 35 U.S.C. § 102 also renders the claim unpatentable under 35 U.S.C. § 103, for "anticipation is the epitome of obviousness." **Jones V. Hardy**, 727 F.2d 1524, 1529, 220 USPQ 1021, 1025 (Fed. Cir. 1984). **See also In re Francalossi**, 681 F.2d

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792, 794, 215 USPQ 569, 571 (CCPA 1982); **In re Pearson**, 494 F.2d 1399, 1402, 181 USPQ 641, 644 (CCPA 1974).<sup>3</sup>

Therefore, we will sustain the Examiner's rejection under 35 U.S.C. § 103.

**V. Whether the Rejection of Claims 100 and 115 Under 35 U.S.C. § 103 is proper?**

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the invention as set forth in claims 100 and 115. Accordingly, we reverse.

With respect to dependent claim 100, Appellants repeat the argument made with respect to claim 98. That argument was addressed above and was found persuasive.

Therefore, we will not sustain the Examiner's rejection under 35 U.S.C. § 103 for the same reasons as set forth above.

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<sup>3</sup> The Board may rely on less than all of the references applied by the Examiner in an obviousness rationale without designating it as a new ground of rejection. **In re Bush**, 296 F.2d 491, 496, 131 USPQ 263, 266-67 (CCPA 1961); **In re Boyer**, 363 F.2d 455, 458 n.2, 150 USPQ 441, 444 n.2 (CCPA 1966).



**VI. Whether the Rejection of Claims 90 and 97 Under  
35 U.S.C. § 103 is proper?**

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the invention as set forth in claims 90 and 97. Accordingly, we reverse.

With respect to dependent claim 90, Appellants argue at page 11 of the brief that the load balancer of Peacock cannot be combined with the system of Tanaka to yield the invention of claim 90. We agree.

As noted by the Examiner in the rejection (answer at page 5), Peacock is directed to load balancing among processors. We find that Peacock does not teach load balancing among servers as is required by the claim. The Examiner attempts to remedy this failure by taking the position at pages 7-8 of the answer that the use of load balancers among servers is "notoriously well known in the art." We have reviewed the rejection and do not find this position or evidence in support thereof to be present in the rejection before us on appeal.

Therefore, we will not sustain the Examiner's rejection under 35 U.S.C. § 103.

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**VII. Whether the Rejection of Claim 101 Under 35 U.S.C. § 103 is proper?**

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the invention as set forth in claim 101. Accordingly, we reverse.

With respect to dependent claim 101, Appellants repeat the arguments made with respect to claims 98 and 90. Those arguments were addressed above and were found persuasive.

Therefore, we will not sustain the Examiner's rejection under 35 U.S.C. § 103 for the same reasons as set forth above.

**Other Issues**

We draw the Examiner's attention to figure 3 of U.S. Patent 6,012,100, which teaches mirrored mass storage devices. We also recommend that the Examiner search available databases for relevant prior art teaching (load near balance\$ near3 server\$).

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### **Conclusion**

In view of the foregoing discussion, we have sustained the rejection under 35 U.S.C. § 102 of claims 79-80, 82-88, 91-95, 102-104, 106, and 108-113; we have sustained the rejection under 35 U.S.C. § 103 of claims 81, 89, 96, 105, and 107; we have not sustained the rejection under 35 U.S.C. § 102 of claims 98-99 and 114; and we have not sustained the rejection under 35 U.S.C. § 103 of claims 90, 97, 100-101, and 115.

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No time period for taking any subsequent action in  
connection with this appeal may be extended under  
37 CFR § 1.136(a)(1)(iv).

**AFFIRMED-IN-PART**



ERROL A. KRASS )  
Administrative Patent Judge )



JOSEPH F. RUGGIERO )  
Administrative Patent Judge )



ALLEN R. MACDONALD )  
Administrative Patent Judge )

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